

AMENDMENTS TO THE DRAWINGS

Attached hereto are twenty-two (22) sheets of corrected formal drawings that comply with the provisions of 37 C.F.R. § 1.84.

It is respectfully requested that the corrected formal drawings be approved and made a part of the record of the above-identified application.



REPLACEMENT SHEET

Dep
accepted
3/16/04

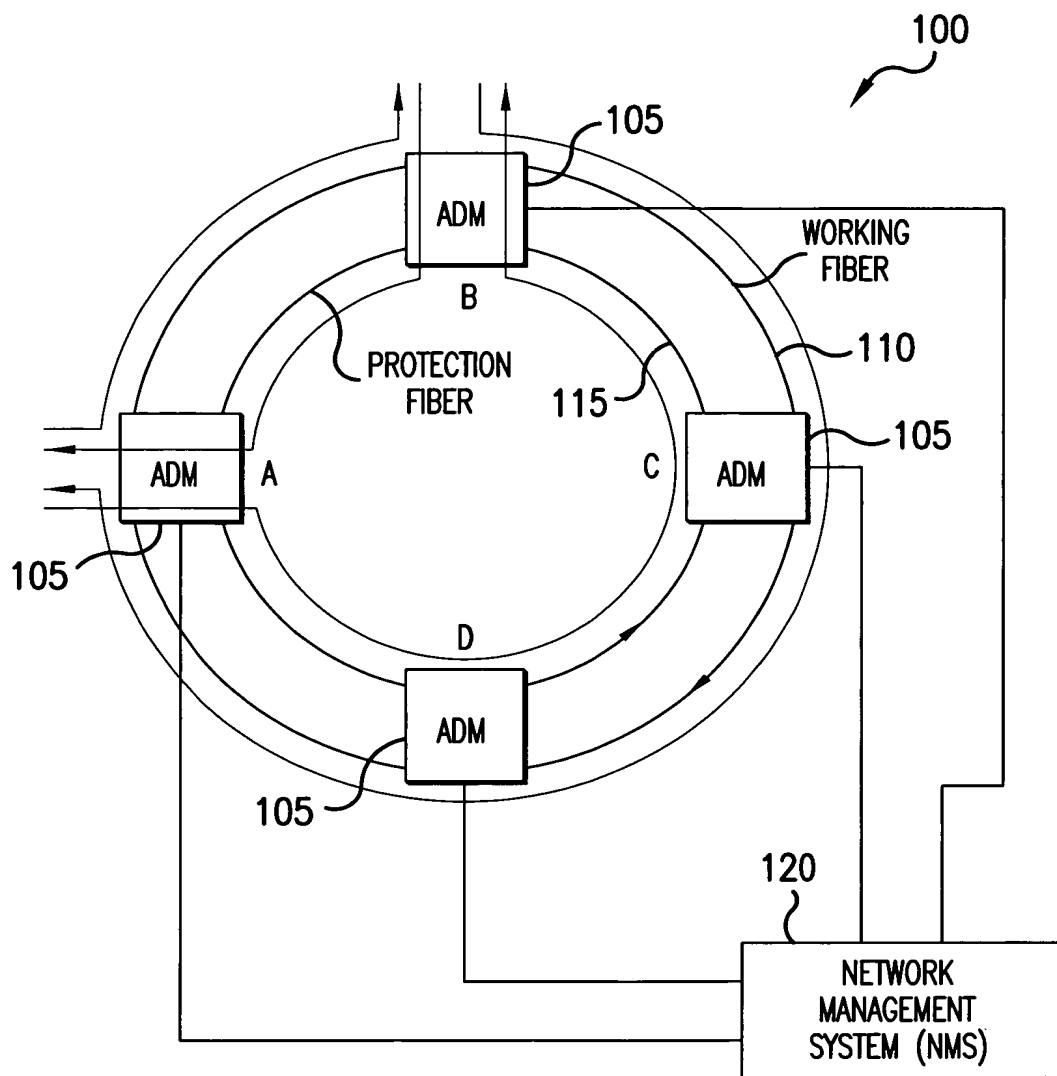


FIG.1
PRIOR ART

REPLACEMENT SHEET

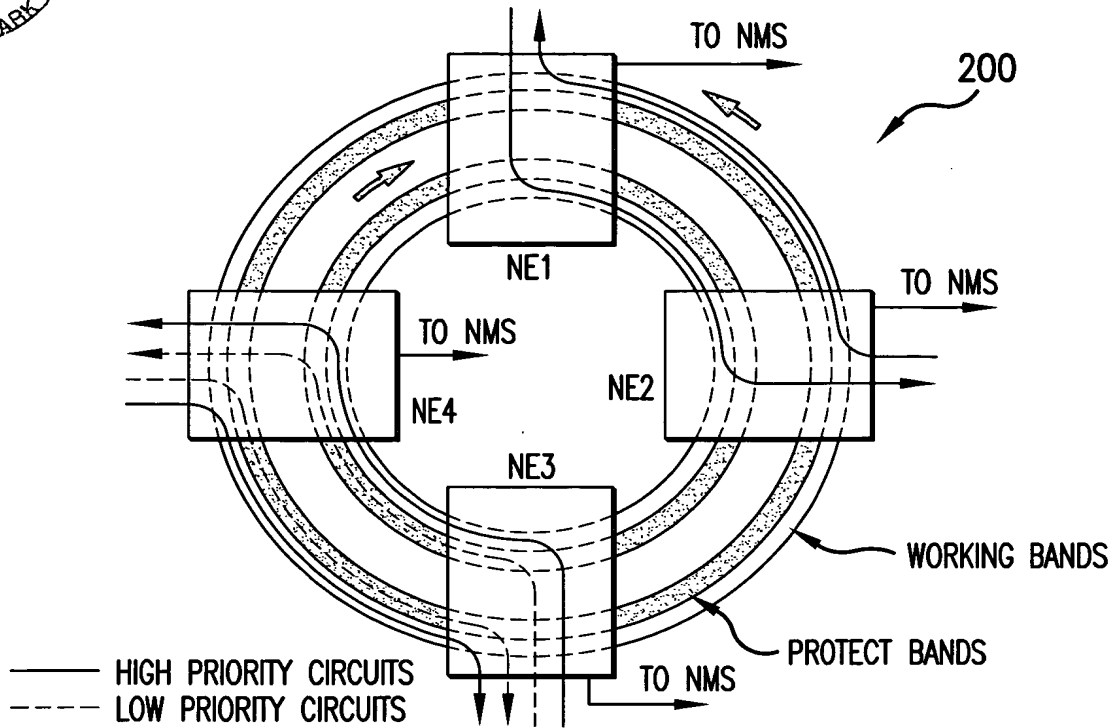


FIG. 2
 PRIOR ART

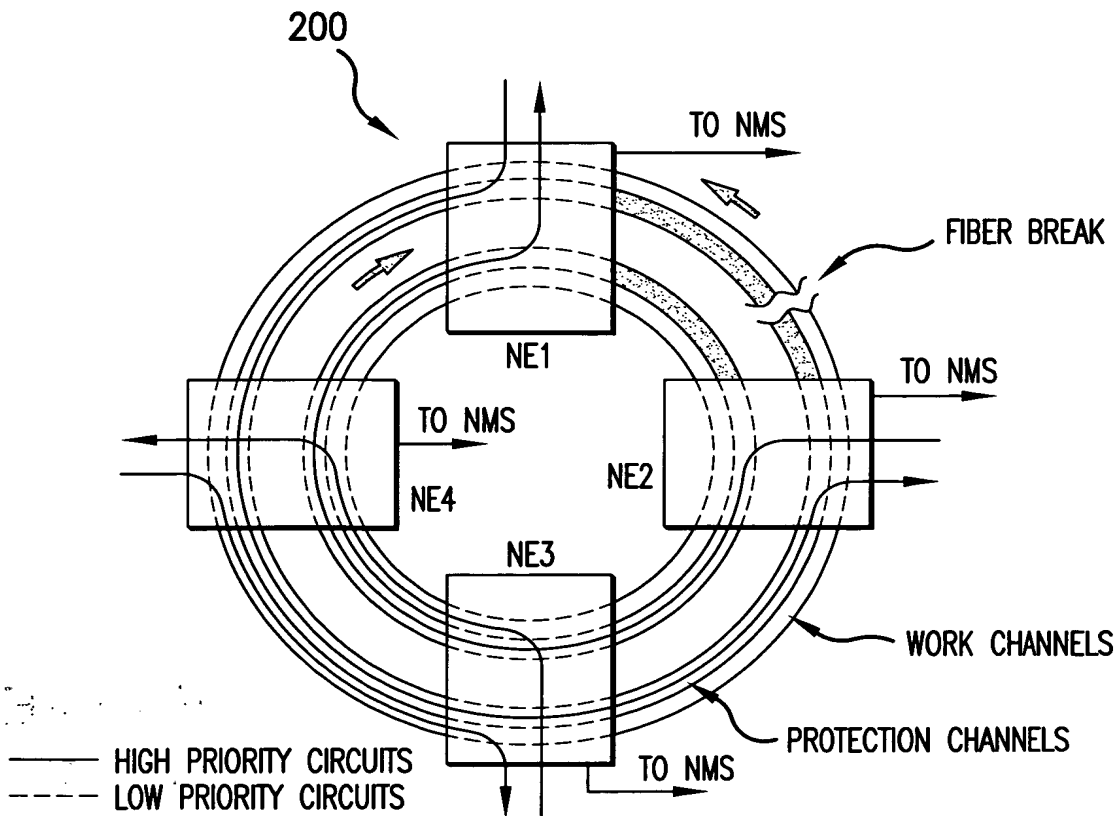
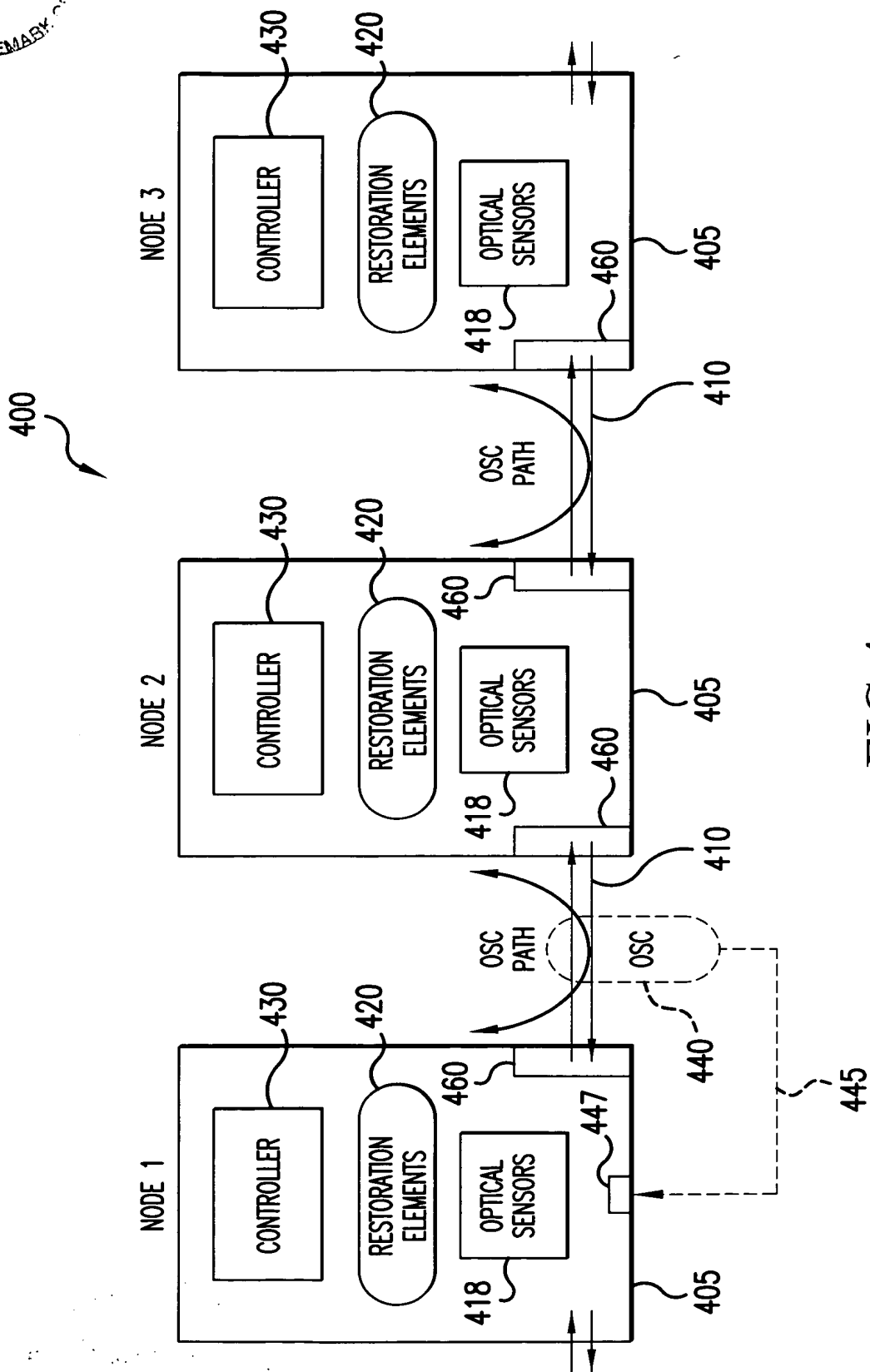


FIG. 3
 PRIOR ART



REPLACEMENT SHEET



REPLACEMENT SHEET

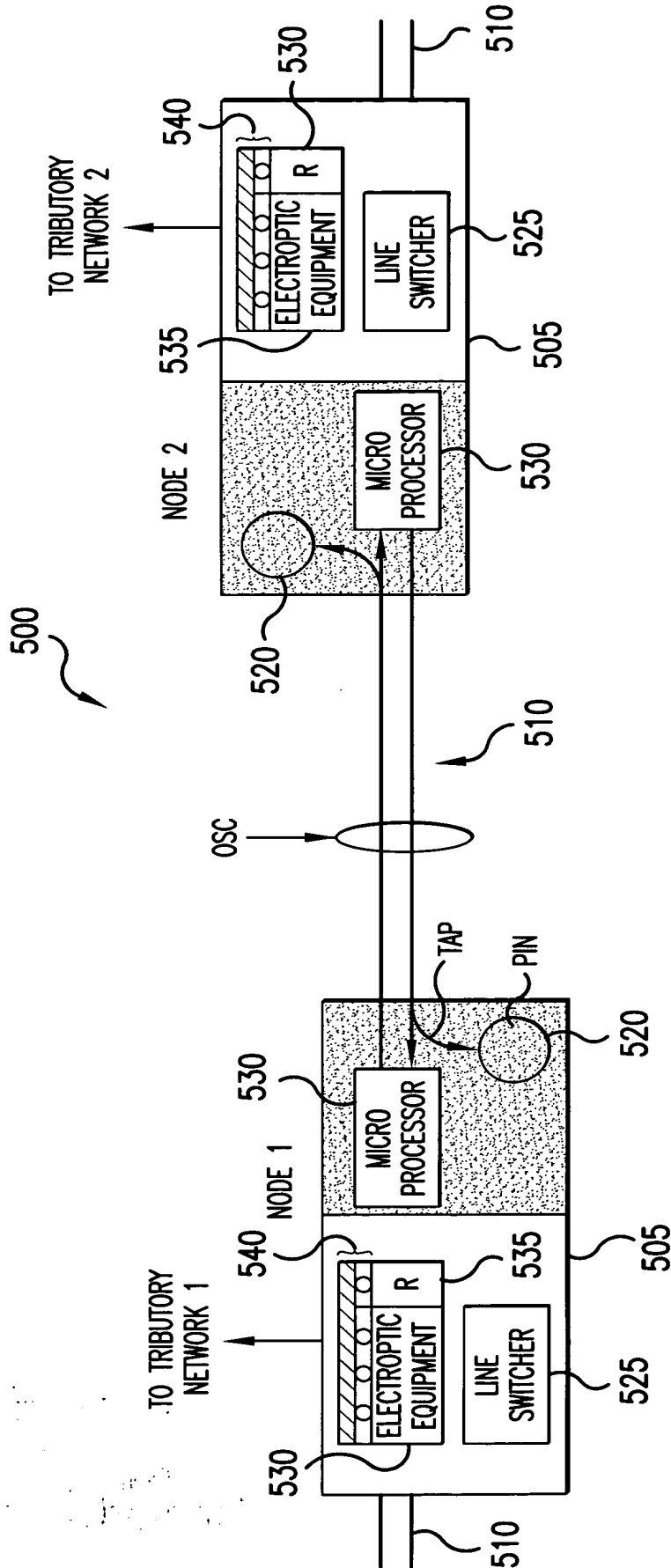


FIG.5



REPLACEMENT SHEET

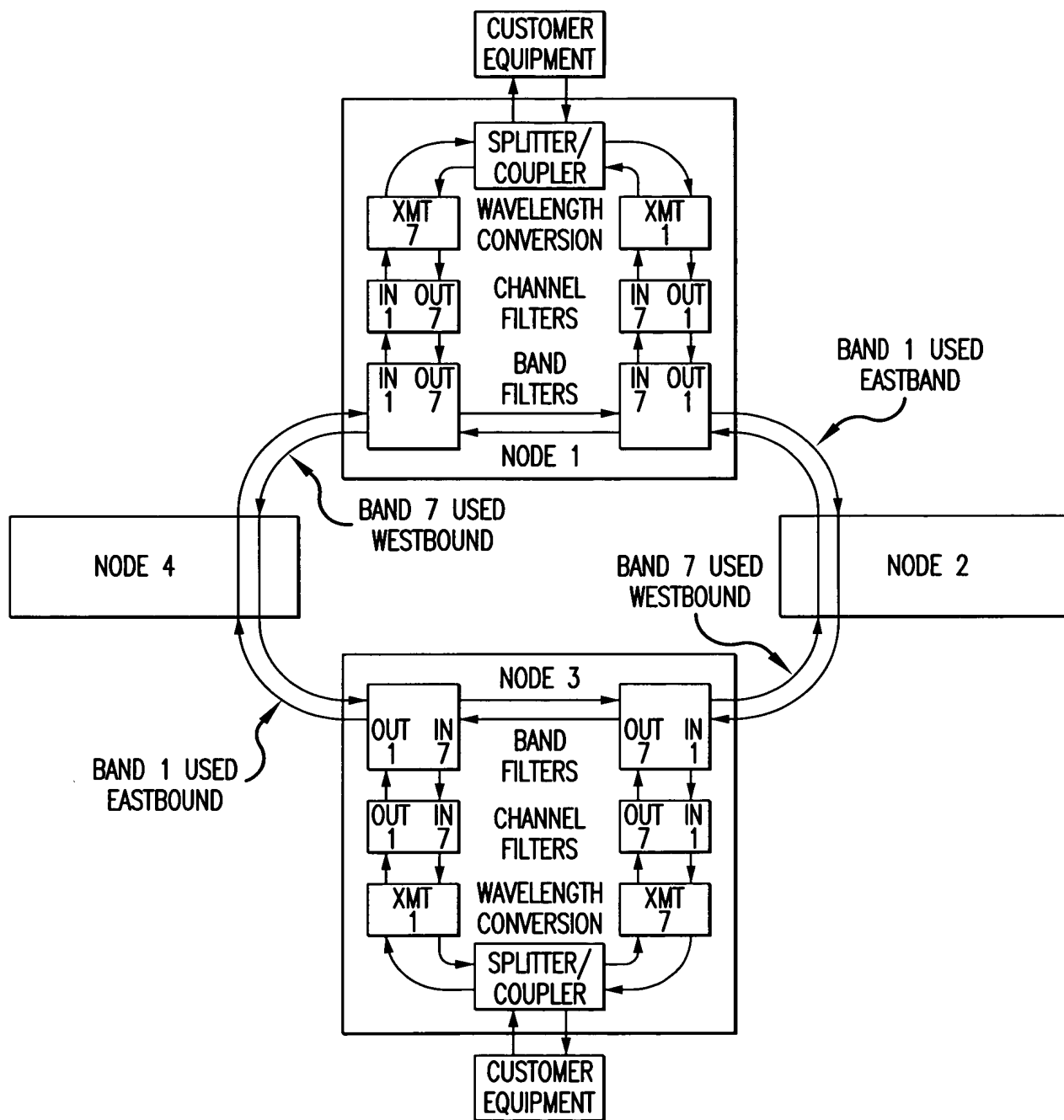


FIG.6



REPLACEMENT SHEET

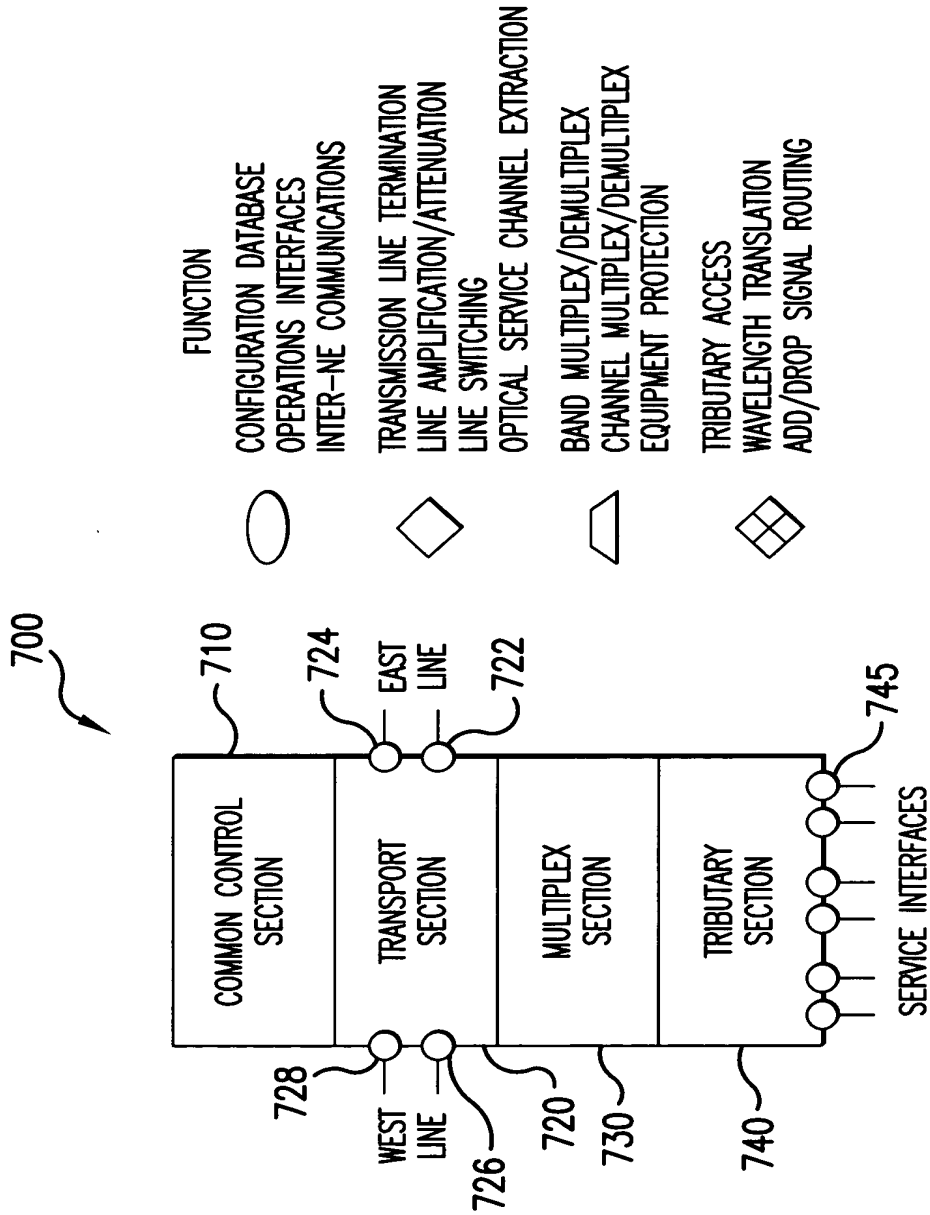
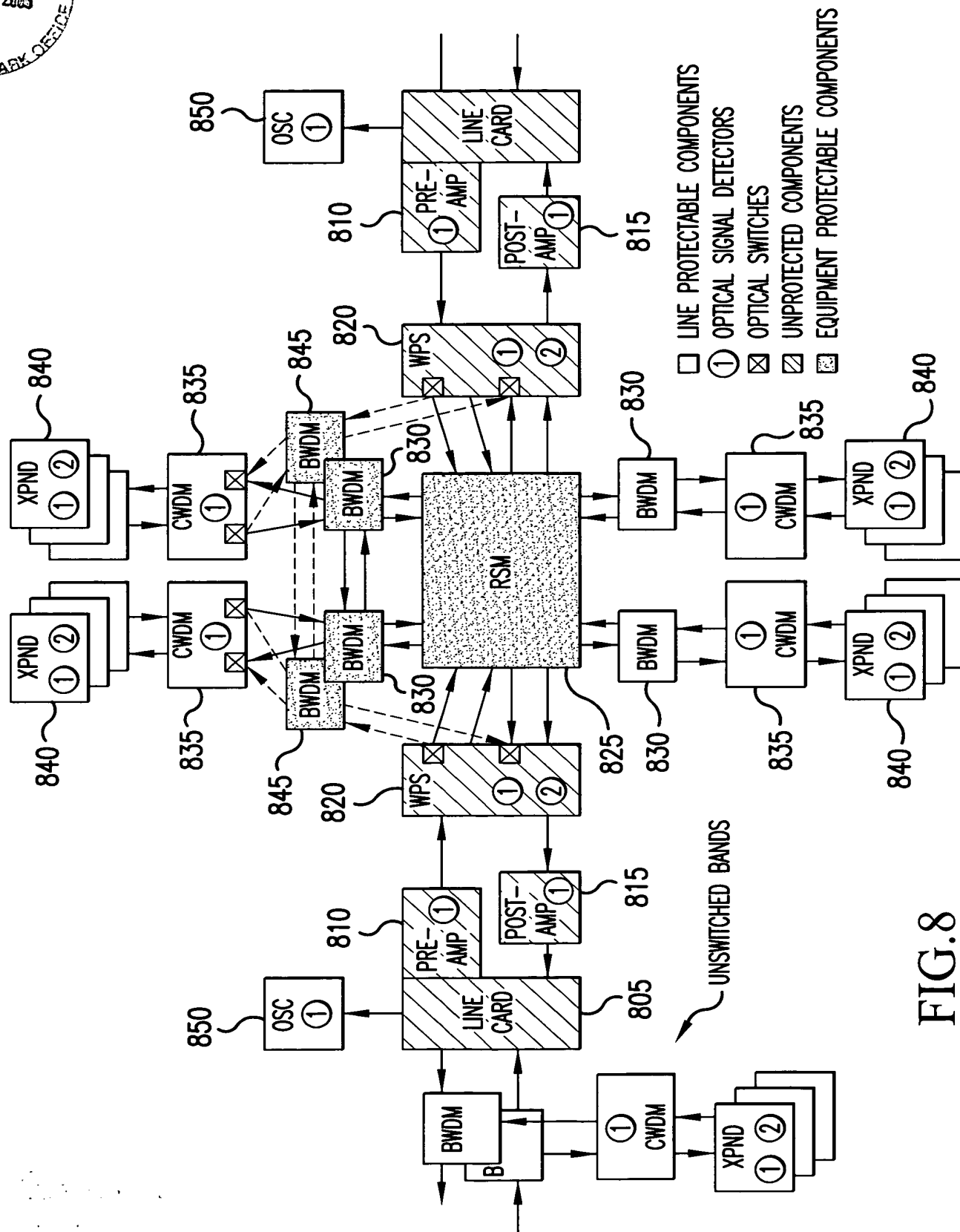


FIG.7



REPLACEMENT SHEET



REPLACEMENT SHEET

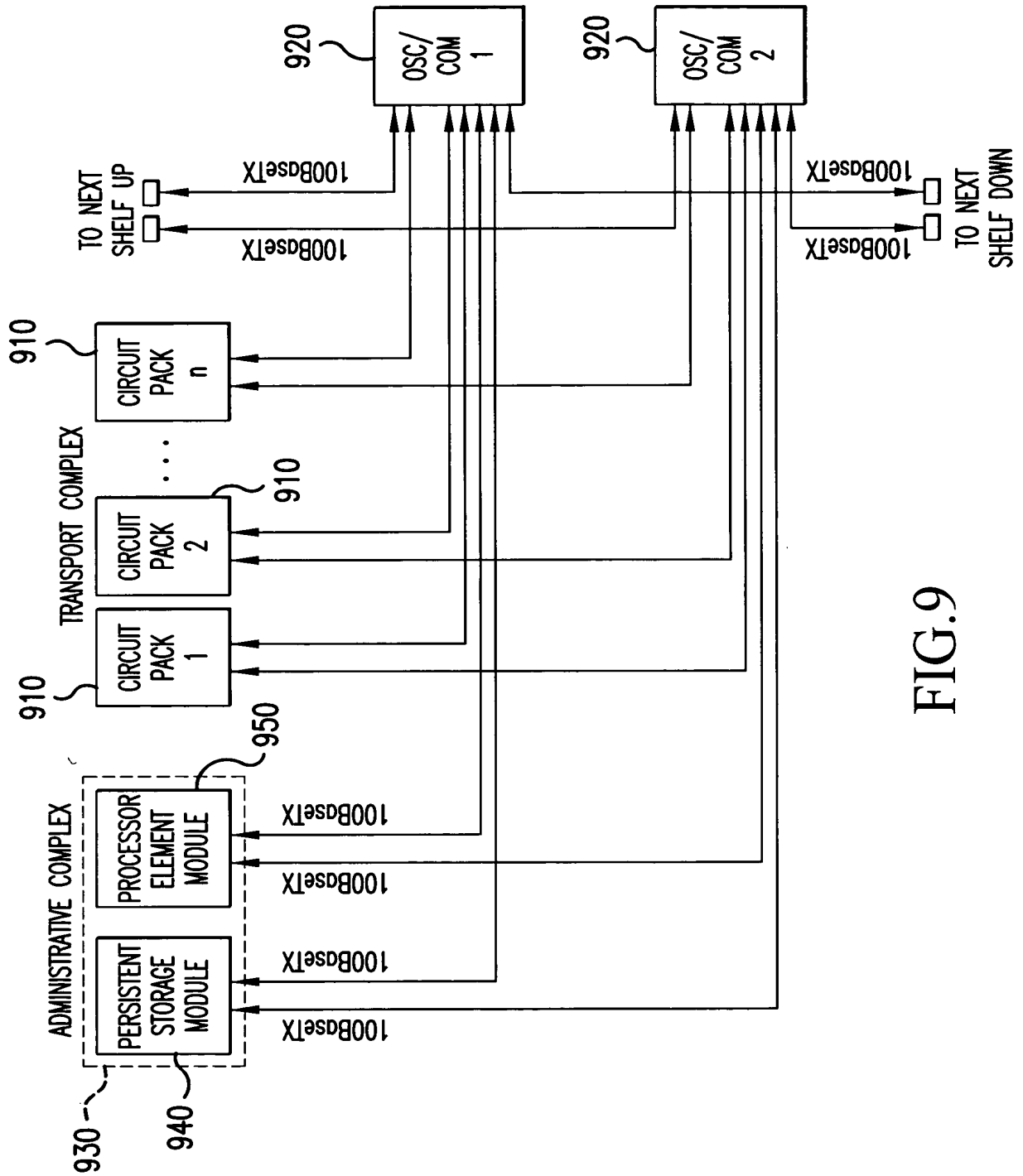


FIG.9



REPLACEMENT SHEET

FIG.10A-1	FIG.10A-2
FIG.10A-3	FIG.10A-4

FIG.10A



REPLACEMENT SHEET

INTRA-NODE FIBER FAULT HANDLING

LEGEND:
RS RING SWITCH
DRS RING SWITCH DELAYED
EQ EQUIPMENT SWITCH
DEQ EQUIPMENT SWITCH DELAYED
LOS LOSS OF SIGNAL AT RECEIVER(S)
INDICATES A RESULTING ACTION THAT DOES NOT MATCH THE DESIRED ACTION FOR THE FAILURE

INDICATES A RESULTING ACTION THAT DOES NOT MATCH THE DESIRED ACTION FOR THE FAILURE

COMPONENT		CONNECTING FIBER LOCAL NODE EFFECT		DOWNSTREAM NODE EFFECT
LINE/ POSTAMP	TO WPS	WORKING; AND PCA DROPS SEE LOS	IF LOCAL NODE ADDS TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. OTHERWISE, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU CHANNELS DETECT LOS DOWNSTREAM. LOCAL ADD CHANNELS ARE OK DOWNSTREAM.	
	FROM WPS		NO IMPACT	DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU OR ADD CHANNELS REPORT LOS DOWNSTREAM.
	TO UNSWITCHED BNDM	LOCAL WORKING, UCA, AND PCA DROPS SEE LOS		IF LOCAL NODE ADDS TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. OTHERWISE, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU CHANNELS DETECT LOS DOWNSTREAM. LOCAL ADD CHANNELS ARE OK DOWNSTREAM.
	FROM UNSWITCHED BNDM		NO IMPACT	DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU OR ADD CHANNELS REPORT LOS DOWNSTREAM.
	TO/FROM OSC		DO NOT PROTECT AGAINST OSC FAILURE—USE AS RING SWITCH TRIGGER IF APPLICABLE	
	TO NEIGHBOR		NO IMPACT	DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU OR ADD CHANNELS REPORT LOS DOWNSTREAM.

DESIRED PROTECTION ACTION				
OPEN NODE	PASSTHRU NODE	BSAME PASSTHRU	BOPOSITE PASSTHRU	RSM PASSTHRU
RS	RS	RS	RS	RS
RS	RS	RS	RS	RS
RS	RS	RS	RS	RS
RS	RS	RS	RS	RS
RS	RS	RS	RS	RS
RS	RS	RS	RS	RS

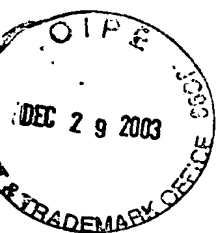
FIG.10A-1



REPLACEMENT SHEET

NODE CONFIGURATIONS - WCA WITHOUT UCA					NODE CONFIGURATIONS - WCA WITH UCA				
OPEN NODE	PASSTHRU NODE	BSAME PASSTHRU	BOPPOSITE PASSTHRU	RSM GLASSTHRU	OPEN NODE	PASSTHRU NODE	BSAME PASSTHRU	BOPPOSITE PASSTHRU	RSM GLASSTHRU
OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	N/A	N/A	N/A	N/A	N/A
OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS
N/A	N/A	N/A	N/A	N/A	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS
DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS	DOWNSTREAM OCS LOS LINE IN LOS ACTION: RS

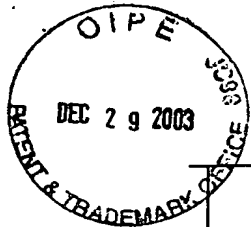
FIG.10A-2



REPLACEMENT SHEET

PREAMP	FROM NEIGHBOR	LOCAL WORKING, UCA, AND PCA DROPS SEE LOS	IF LOCAL NODE ADDS TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. OTHERWISE, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU CHANNELS DETECT LOS DOWNSTREAM. LOCAL ADD CHANNELS ARE OK DOWNSTREAM.	RS	RS	RS	RS	RS	RS
	TO WPS OR UNSWITCHED BAND	WORKING AND PCA DROPS SEE LOS	IF LOCAL NODE ADDS TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. OTHERWISE, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU CHANNELS DETECT LOS DOWNSTREAM. LOCAL ADD CHANNELS ARE OK DOWNSTREAM.	RS	RS	RS	RS	RS	RS
	FROM LINE CARD	WORKING AND PCA DROPS SEE LOS	IF LOCAL NODE ADDS TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. OTHERWISE, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT. LOCAL PASSTHRU CHANNELS DETECT LOS DOWNSTREAM. LOCAL ADD CHANNELS ARE OK DOWNSTREAM.	RS	RS	RS	RS	RS	RS
WPS	WORKING FROM RSM	NO IMPACT	LOCAL PASSTHRU AND ADD WORKING CHANNELS REPORT LOS DOWNSTREAM. PCA CHANNELS OK DOWNSTREAM. IF LOCAL NODE HAS PROTECT ACCESS TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. IF NO PROTECT ACCESS TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS NO LIGHT.	EQ	EQ	EQ	EQ	EQ	EQ
	PROTECT FROM RSM (NO ACTION TAKEN SINCE PROTECT EQUIPMENT)	NO IMPACT	LOCAL PASSTHRU AND ADD PCA CHANNELS REPORT LOS DOWNSTREAM.	N/A	N/A	N/A	N/A	N/A	N/A
	WORKING FROM BACKUP BNDM	NO IMPACT	LOCAL PASSTHRU AND ADD WORKING CHANNELS REPORT LOS DOWNSTREAM. PCA CHANNELS OK DOWNSTREAM. IF LOCAL NODE HAS PROTECT ACCESS	N/A	N/A	N/A	N/A	N/A	N/A

FIG.10A-3



REPLACEMENT SHEET

OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS	OSC LOS LINE IN LOS ACTION: RS
OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS	OSC OK WPS IN LOS RESULT: LOS
OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS
OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

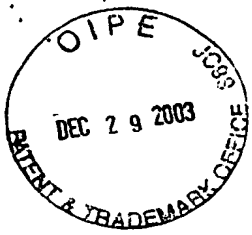
FIG.10A-4



REPLACEMENT SHEET

FIG.10B-1	FIG.10B-2
FIG.10B-3	FIG.10B-4

FIG.10B



REPLACEMENT SHEET

WORKING TO RSM	LOCAL WORKING CHANNEL DROPS SEE LOS	IF LOCAL NODE ADDS WORKING CHANNELS OR CARRIES PCA TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. LOCAL PASSTHRU WORKING CHANNELS SEE LOS DOWNSTREAM. LOCAL ADD CHANNELS ARE OK DOWNSTREAM.	EQ	EQ	EQ	EQ	EQ	EQ
PROTECT TO RSM (NO ACTION TAKEN SINCE PROTECT EQUIPMENT)	PROTECT ACCESS DROPS SEE LOS.	LOCAL DROP AND PASSTHRU PCA CHANNELS REPORT LOS	N/A	N/A	N/A	N/A	N/A	N/A
WORKING FROM PRIMARY BNDM		LOCAL PASSTHRU AND ADD WORKING CHANNELS REPORT LOS DOWNSTREAM. PCA CHANNELS OK. IF LOCAL NODE HAS PCA DOWNSTREAM NEIGHBOR SEES LIGHT.	EQ	EQ	EQ	EQ	EQ	EQ
PROTECT FROM BNDM (NO ACTION TAKEN SINCE PROTECT EQUIPMENT)		LOCAL ADD AND PASSTHRU PCA CHANNELS REPORT LOS	N/A	N/A	N/A	N/A	N/A	N/A
WORKING TO PRIMARY BNDM	LOCAL WORKING CHANNEL DROPS SEE LOS	IF LOCAL NODE ADDS WORKING CHANNELS OR CARRIES PCA TRAFFIC, DOWNSTREAM NEIGHBOR WPS RECEIVE PIN DETECTS LIGHT. LOCAL PASSTHRU WORKING CHANNELS SEE LOS DOWNSTREAM. LOCAL ADD CHANNELS ARE OK DOWNSTREAM.	EQ	EQ	EQ	EQ	EQ	EQ

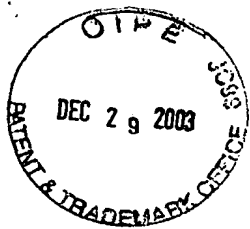
FIG.10B-1



REPLACEMENT SHEET

OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS	OSC OK LINE IN OK RESULT: LOS
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

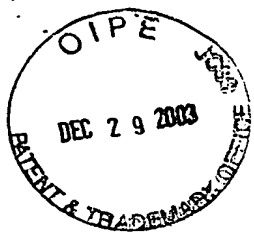
FIG.10B-2



REPLACEMENT SHEET

BNDM	PROTECT TO BNDM (NO ACTION TAKEN SINCE PROTECT EQUIPMENT)	LOCAL DROP AND PASSTHRU PCA CHANNELS REPORT LOS		N/A	N/A	N/A	N/A	N/A
	TO CNDM	LOCAL CHANNEL DROPS SEE LOS	NO IMPACT	EQ (LOS IF UCA)	EQ (LOS IF UCA)	EQ (LOS IF UCA)	EQ (LOS IF UCA)	EQ (LOS IF UCA)
	FROM CNDM	NO IMPACT	NO IMPACT	EQ (LOS IF UCA)	EQ (LOS IF UCA)	EQ (LOS IF UCA)	EQ (LOS IF UCA)	EQ (LOS IF UCA)
	TO BNDM (FROM RSM TOWARD PASSTHRU)	LOCAL CHANNEL DROPS DOWNSTREAM OF FAILURE SEE LOS	PASSTHRU WORKING CHANNELS SEE LOS DOWNSTREAM.	EQ	EQ	EQ	EQ	EQ
	FROM BNDM (FROM PASSTHRU TOWARD RSM)	NO IMPACT	PASSTHRU CHANNELS SEE LOS DOWNSTREAM. ADDED CHANNELS "UPSTREAM" OF THE FAILURE SEE LOS DOWNSTREAM. CHANNELS ADDED FOLLOWING FAILURE ARE OK.	EQ	EQ	EQ	EQ	EQ
	TO/FROM BNDM (PASSTHRU)	NO IMPACT	PASSTHRU CHANNELS SEE LOS DOWNSTREAM. ADDED CHANNELS ARE OK DOWNSTREAM.	N/A	EQ	N/A	EQ	N/A
WCI	TO CNDM	NO IMPACT		LOS	LOS	LOS	LOS	LOS
	FROM CNDM	LOCAL LOS		LOS	LOS	LOS	LOS	LOS

FIG.10B-3



REPLACEMENT SHEET

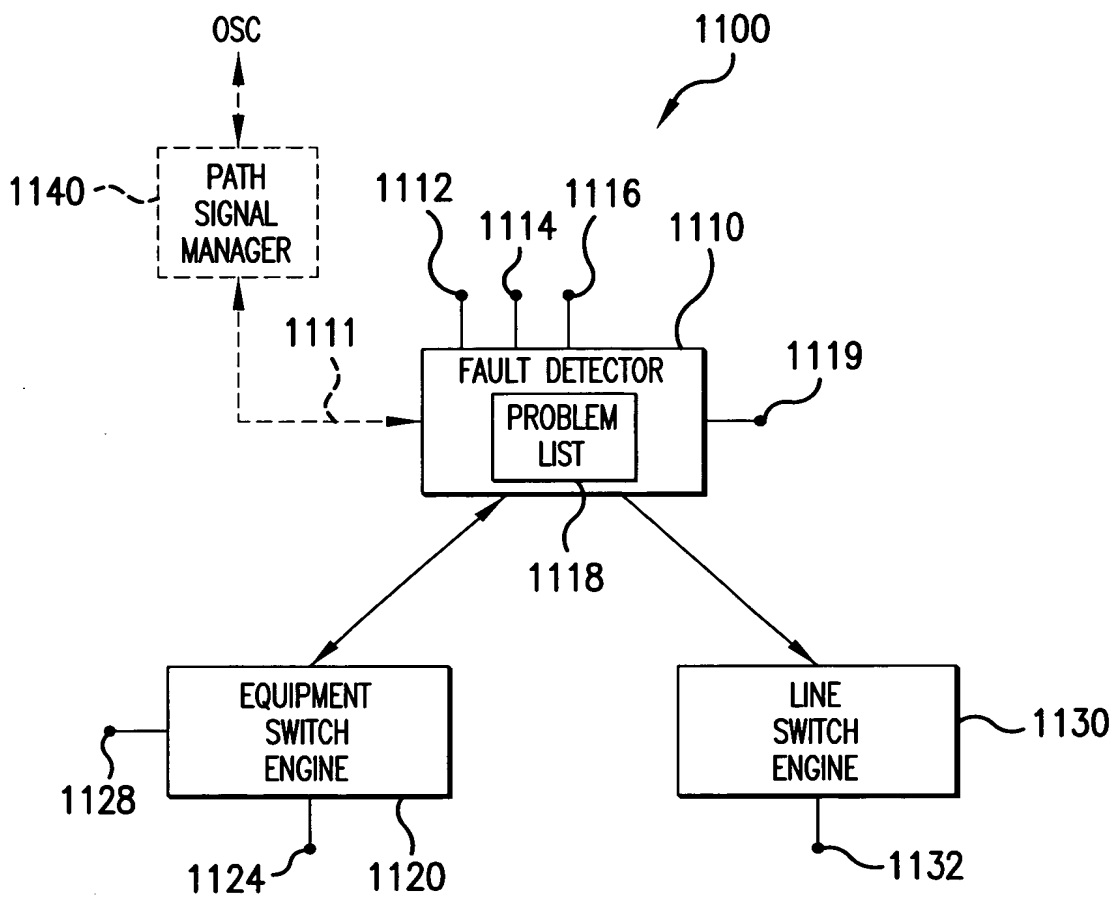
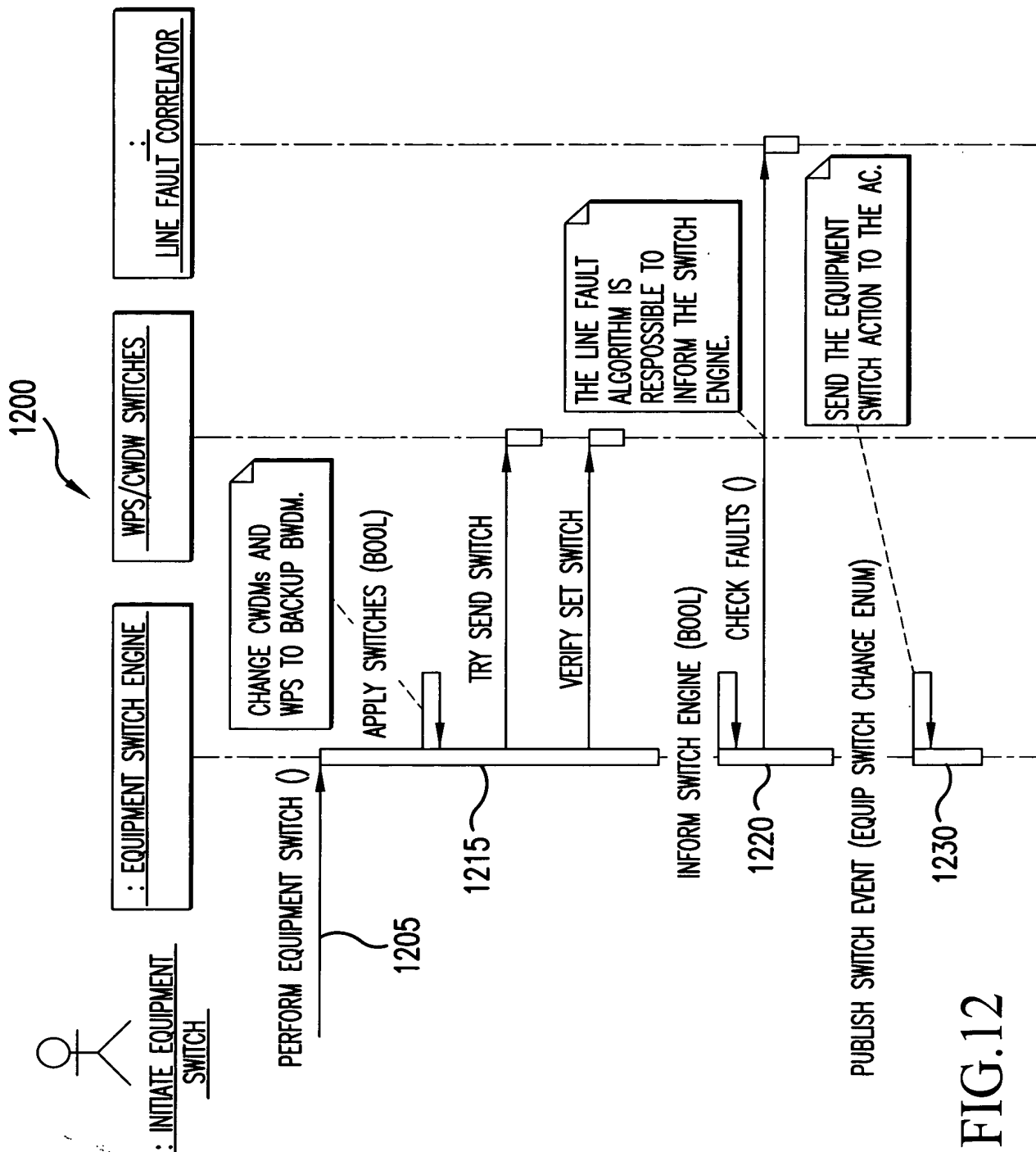


FIG.11



REPLACEMENT SHEET





REPLACEMENT SHEET

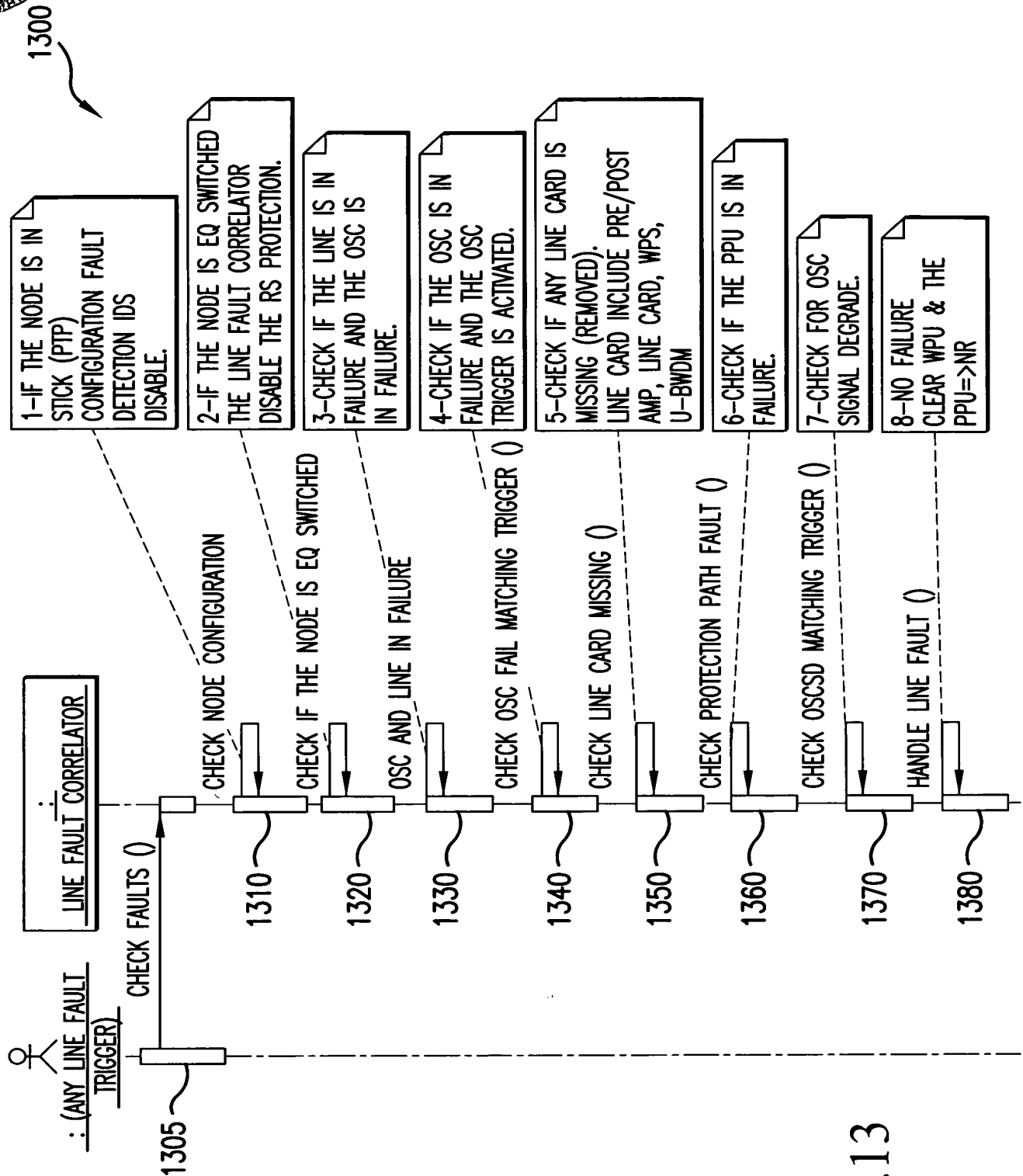


FIG.13



REPLACEMENT SHEET

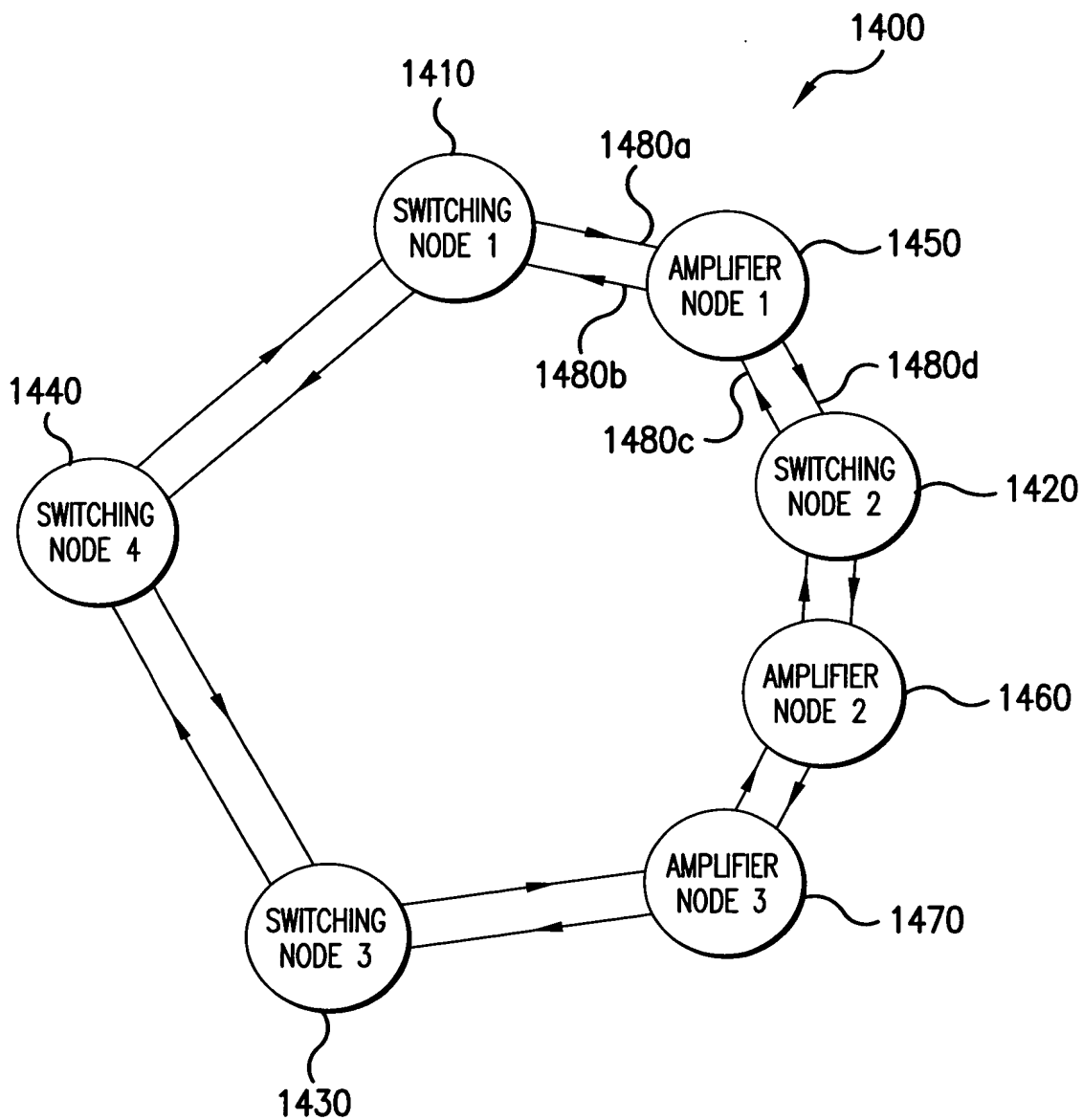


FIG.14